

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Scott Pierce on 09/14/2011.

The application has been amended as follows:

Change(s) applied to document,
/J.L.B./
10/24/2011

2. Please replace claims 1-3, 25, 26, ³²~~31~~, 37, 38 and 40 with the following claims respectively.

Claim 1:

A variable-impedance active ankle foot orthosis comprising:

- a) an actuator configured to support a human ankle joint;
- b) at least one of an ankle angle sensor and a ground reaction force sensor; and
- c) a computer controller linked to the actuator and the sensor, the computer controller configured to receive sensory information from the at least one sensor and configured to modulate, in an updating manner, impedance of the actuator in response to at least one signal from the sensor, thereby modulating, by computer-controlled actuation, impedance of the human ankle joint, including a joint stiffness or damping of the ankle joint, from step-to-step of a walk cycle for treating an ankle foot gait pathology.

Claim 2:

The device of Claim 1, wherein the actuator includes a torsional spring control component that is configured to modulate impedance of the ankle joint.